## In The Claims:

- 1. (Currently Amended) A system for effectively performing a scheduling operation for an electronic device, comprising:
  - an allocation manager configured to handle a scheduling request from device software of said electronic device by analyzing request parameters;
  - a scheduling manager configured to schedule a task that is authorized by said allocation manager; and
  - a processor for controlling said allocation manager and said scheduling manager to thereby perform said scheduling operation.
- 2. (Original) The system of claim 1 wherein said task includes one or more isochronous processes that require a deterministic and guaranteed performance.
- 3. (Original) The system of claim 1 wherein said scheduling operation is performed in an electronic network that is implemented according to an IEEE Std 1394 serial bus interconnectivity standard.
- 4. (Currently Amended) The system of claim 1 wherein said task is performed on [[a]] said electronic device that includes one of a consumer-electronics device, an audio-visual device, a set-top box device, and a computer device.
- 5. (Original) The system of claim 1 wherein said task includes one of a data transfer operation, a processor operation, a memory-access operation, and a signal-processing operation.

- 6. (Currently Amended) The system of claim 1 wherein said request parameters include at least one of a resource requirement and an execution interval for performing said task, said execution interval being a maximum time period within which said task must be executed.
- 7. (Currently Amended) The system of claim 6 wherein <u>said</u> device software issues said scheduling request to said allocation manager for scheduling said task.
- 8. (Original) The system of claim 6 wherein said allocation manager analyzes said resource requirement to limit total allocated device resources to one-hundred percent of available device resources.
- 9. (Original) The system of claim 6 wherein said scheduling operation is synchronized to a base cycle that serves as a timing reference for performing said task, said base cycle forming part of a contiguous base cycle sequence.
- 10. (Original) The system of claim 9 wherein said allocation manager analyzes said execution interval to ensure that an execution interval duration T conforms to a symmetrical execution-interval specification requirement.

- 11. (Currently Amended) A system for effectively performing a scheduling operation for an electronic device, comprising:
  - an allocation manager configured to handle a scheduling request <u>from</u>

    <u>device software of said electronic device</u> by analyzing request

    parameters that include at least one of a resource requirement and
    an execution interval for performing said task;
  - a scheduling manager configured to schedule a task that is authorized by said allocation manager; and
  - a processor for controlling said allocation manager and said scheduling manager to thereby perform said scheduling operation, said scheduling operation being synchronized to a base cycle that serves as a timing reference for performing said task, said base cycle forming part of a contiguous base cycle sequence, said allocation manager analyzing said execution interval to ensure that an execution interval duration T conforms to a symmetrical execution-interval specification requirement, said symmetrical execution interval specification requirement being expressed by a formula:

$$T = (t_{base}) 2^n$$

where  $t_{\text{base}}$  is a duration of said base cycle, and T is said execution interval duration required for executing said task.

- 12. (Original) The system of claim 6 wherein said allocation manager analyzes said scheduling request and returns one of an error message or a request grant message.
- 13. (Original) The system of claim 6 wherein said allocation manager adds said task to a task table along with at least one of said resource requirement and said execution interval.

- 14. (Original) The system of claim 13 wherein said allocation manager assigns a scheduling priority level to said task, said scheduling priority level being inversely proportional to said execution interval.
- 15. (Original) The system of claim 14 wherein said scheduling manager references said task table to identify said task for scheduling based upon said scheduling priority level.
- 16. (Original) The system of claim 15 wherein said scheduling manager references a ready-to-run table to determine whether said task can immediately be scheduled and executed.
- 17. (Original) The system of claim 15 wherein said scheduling manager schedules and begins executing said task.
- 18. (Original) The system of claim 17 wherein said scheduling manager references a resources-consumed table to determine whether said task has consumed all allocated resources, said scheduling manager terminating said task when an allocated-resource limit is reached.
- 19. (Original) The system of claim 17 wherein said processor resets said scheduling operation when a new base cycle begins.
- 20. (Original) The system of claim 1 wherein said scheduling operation includes a plurality of tasks that are scheduled to execute in a sequence in which only one of said plurality of tasks may execute at any given moment.

- 21. (Currently Amended) A method for effectively performing a scheduling operation for an electronic device, comprising the steps of:
  - handling a scheduling request <u>from device software of said electronic</u>

    <u>device</u> by analyzing request parameters <del>from device software</del> with an allocation manager;
  - utilizing a scheduling manager to schedule a task that is authorized by said allocation manager; and
  - controlling said allocation manager and said scheduling manager with a processor to thereby perform said scheduling operation.
- 22. (Original) The method of claim 21 wherein said task includes one or more isochronous processes that require a deterministic and guaranteed performance.
- 23. (Original) The method of claim 21 wherein said scheduling operation is performed in an electronic network that is implemented according to an IEEE Std 1394 serial bus interconnectivity standard.
- 24. (Currently Amended) The method of claim 21 wherein said task is performed on [[a]] said electronic device that includes one of a consumer-electronics device, an audio-visual device, a set-top box device, and a computer device.
- 25. (Original) The method of claim 21 wherein said task includes one of a data transfer operation, a processor operation, a memory-access operation, and a signal-processing operation.
- 26. (Currently Amended) The method of claim 21 wherein said request parameters include at least one of a resource requirement and an execution interval for performing said task, said execution interval being a maximum time period within which said task must be executed.

- 27. (Currently Amended) The method of claim 26 wherein <u>said</u> device software issues said scheduling request to said allocation manager for scheduling said task.
- 28. (Original) The method of claim 26 wherein said allocation manager analyzes said resource requirement to limit total allocated device resources to one-hundred percent of available device resources.
- 29. (Original) The method of claim 26 wherein said scheduling operation is synchronized to a base cycle that serves as a timing reference for performing said task, said base cycle forming part of a contiguous base cycle sequence.
- 30. (Original) The method of claim 29 wherein said allocation manager analyzes said execution interval to ensure that an execution interval duration T conforms to a symmetrical execution-interval specification requirement.

31. (Currently Amended) A method for effectively performing a scheduling operation for an electronic device, comprising the steps of:

handling a scheduling request <u>from device software of said electronic</u>

<u>device</u> by analyzing request parameters with an allocation manager,
said request parameters including at least one of a resource
requirement and an execution interval for performing said task;
utilizing a scheduling manager to schedule a task that is authorized by
said allocation manager; and

controlling said allocation manager and said scheduling manager with a processor to thereby perform said scheduling operation, said scheduling operation being synchronized to a base cycle that serves as a timing reference for performing said task, said base cycle forming part of a contiguous base cycle sequence, said allocation manager analyzing said execution interval to ensure that an execution interval duration T conforms to a symmetrical execution interval specification requirement, said symmetrical execution interval specification requirement being expressed by a formula:

$$T = (t_{base}) 2^n$$

where  $t_{\text{base}}$  is a duration of said base cycle, and T is said execution interval duration required for executing said task.

- 32. (Original) The method of claim 26 wherein said allocation manager analyzes said scheduling request and returns one of an error message or a request grant message.
- 33. (Original) The method of claim 26 wherein said allocation manager adds said task to a task table along with at least one of said resource requirement and said execution interval.

- 34. (Original) The method of claim 33 wherein said allocation manager assigns a scheduling priority level to said task, said scheduling priority level being inversely proportional to said execution interval.
- 35. (Original) The method of claim 34 wherein said scheduling manager references said task table to identify said task for scheduling based upon said scheduling priority level.
- 36. (Original) The method of claim 35 wherein said scheduling manager references a ready-to-run table to determine whether said task can immediately be scheduled and executed.
- 37. (Original) The method of claim 35 wherein said scheduling manager schedules and begins executing said task.
- 38. (Original) The method of claim 37 wherein said scheduling manager references a resources-consumed table to determine whether said task has consumed all allocated resources, said scheduling manager terminating said task when an allocated-resource limit is reached.
- 39. (Original) The method of claim 37 wherein said processor resets said scheduling operation when a new base cycle begins.
- 40. (Original) The method of claim 21 wherein said scheduling operation includes a plurality of tasks that are scheduled to execute in a sequence in which only one of said plurality of tasks may execute at any given moment.

- 41. (Currently Amended) A computer-readable medium containing program instructions for performing scheduling operations for an electronic device by performing the steps of:
  - handling a scheduling request by analyzing request parameters from device software of said electronic device with an allocation manager;
  - utilizing a scheduling manager to schedule a task that is authorized by said allocation manager; and
  - controlling said allocation manager and said scheduling manager with a processor to thereby perform said scheduling operation.
- 42. (Currently Amended) A system for effectively performing a scheduling operation for an electronic device, comprising:
  - means for handling a scheduling request by analyzing request parameters from device software of said electronic device;
  - means for scheduling a task that is authorized by said means for handling said scheduling request; and
  - means for controlling said means for handling said scheduling request and said means for scheduling tasks to thereby perform said scheduling operation.

- 43. (New) A system for effectively performing a task scheduling operation for an electronic device, comprising:
  - an allocation manager configured to handle a scheduling request from device software of said electronic device, said scheduling request corresponding to a processing task of said electronic device, said allocation manager analyzing request parameters for authorizing said scheduling request, said request parameters including a resource requirement and an execution interval within which said processing task must be executed;
  - a scheduling manager configured to schedule said processing task after said processing task has been authorized by said allocation manager; and
  - a processor for controlling said allocation manager and said scheduling manager to perform said task scheduling operation, said task scheduling operation being synchronized to a base execution cycle of said electronic device, said allocation manager authorizing said processing task only when said execution interval is equal to an even multiple of a power of two times a cycle duration of said base cycle.